**CLAIMS:**

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent is:

1  1.     A computer device comprising:

2

3  a projecting device for displaying a graphical representation of a keyboard, said

4  graphical representation including key locations capable of being selected by an

5  object, said graphical image displayed in an area proximate said device;

6

7  a signal detection system for detecting the presence of an object located at a selected

8  key location within said area; and,

9

10  mechanism for determining the selected key in response to detecting an object at a

11  corresponding selected key location and registering said selected key as a keystroke in

12  said computing device.

1  2.    The computer device according to Claim 1, wherein said signal detection

2  system is capable of detecting objects at locations within said limited range defined by

3  said graphical representation.

1  3.    The computer device according to Claim 2, wherein said signal detection

2  system includes a radar device for detecting the location of objects within said limited

3  range.

1  4.    The computer device according to Claim 2, wherein said signal detection

2  system includes a laser generator and photodetector device for detecting the location

3  of objects within said limited range.

1  5.    The computer device according to Claim 2, wherein said signal detection

2  system includes an electromagnetic signal transmitter means for iteratively

3  transmitting series of electromagnetic signals sweeping said limited range, and

4  receiving electromagnetic signal reflections from detected objects, wherein said

5  electromagnetic signal transmitter means is located a predetermined distance away

6  from said graphical representation.


1  6.    The computer device according to Claim 5, wherein said determining

2  mechanism includes: means for calculating a distance between said electromagnetic

3  signal transmitter means and said detected object; and means for determining a current

4  iteration of said series of electromagnetic signals, wherein said key is determined

5  according to said distance and said current iteration.


1  7.    The computer device according to Claim 5, wherein said means for calculating

2  a distance between said electromagnetic signal transmitter means and said detected

3  object includes means for determining an elapsed time between transmission of said

4  electromagnetic signal and receipt of its corresponding reflected signal.


1  8.    The computer device according to Claim 5, further comprising memory means

2  comprising a mapping of valid selectable key strokes according to calculated distances

3  and electromagnetic signal pulse iteration.


1  9.    The computer device according to Claim 5, further comprising leg means for

2  adjusting a vertical and angular orientation of said projecting and signals detection

3  devices with respect to a surface, said adjusting mechanism for adjusting a range of

4  said series of electromagnetic signals according to a projected display.


1  10.   The computer device according to Claim 1, wherein an object includes a finger

2  of a user of said computer device.

1    11.    The computer device according to Claim 5, further comprising means for

2    customizing content of said virtual keys provided in the graphical representation of

3    said keyboard.


1    12.    A computer device comprising:

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3    a projecting device for displaying one of: a screen image or portion of a screen image

4    display, said screen image including displayed items capable of being selected by an

5    object;

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7    a signal detection system for detecting the presence of an object located at a selected

8    item location; and,
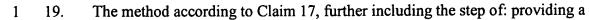
9

10    mechanism for determining the selected item in response to detecting an object at a

11    corresponding selected key location.


1    13.    The computer device according to Claim 12, wherein said signal detection

2    system is capable of detecting objects at locations within a limited range defined by

3    said graphical representation.


1    14.    The computer device according to Claim 13, wherein said signal detection

2    system includes a radar device for detecting the location of objects within said limited

3    range.


1    15.    A method for providing input to a computer device comprising the steps of:

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3    a) displaying a graphical representation of a keyboard image,

4    said graphical representation including key locations capable of being selected by an

5    object, said graphical image displayed in a limited area proximate said device;

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7    b) detecting the presence of an object located at a selected key location; and,

8

9    c) determining the selected key in response to detecting an object at a corresponding

10   selected key location.


1    16.    The method according to Claim 15, wherein said detecting step includes the

2    steps of:

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4    iteratively transmitting series of electromagnetic signals for sweeping said limited

5    area, a transmitter of said electromagnetic signals being provided at a limited distance

6    away from said graphical representation;

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8    receiving via a receiver device electromagnetic signal reflections from an object

9    positioned within said limited area.


1    17.    The method according to Claim 16, wherein said selected key determining step

2    comprises the steps of:

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4    calculating a distance between said electromagnetic signal transmitter and said

5    detected object; and,

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7    determining a current iteration of said series of electromagnetic signals, wherein said

8    key is determined according to said distance and said current iteration.


1    18.    The method according to Claim 17, wherein said calculating step includes the

2    step of determining an elapsed time between transmission of said electromagnetic

3    signal and receipt of its corresponding reflected signal.

1    19.     The method according to Claim 17, further including the step of: providing a

2    mapping of valid selectable key strokes according to calculated distances and

3    electromagnetic signal pulse iteration.


1    20.     The method according to Claim 16, wherein prior to iteratively transmitting

2    series of electromagnetic signals for sweeping said limited area, the step of

3    positioning the transmitter device to thereby restrict electromagnetic signal sweep

4    range.


1    21.     The method according to Claim 16, wherein after determination step c), the

2    step of registering said selected key as a keystroke in said computing device.


1    22.     The method according to Claim 16, wherein after determination step c), the

2    step of notifying a user of a key being selected in said projected display, said notifying

3    including one or more of: changing a color or dimension of the selected virtual key.